

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**FACT SHEET
ORDER NO. R9-2002-0161
NPDES PERMIT NO. CA0109151**

**WASTE DISCHARGE REQUIREMENTS
FOR
SOUTHWEST MARINE, INC.
SAN DIEGO COUNTY**

A. CONTACT INFORMATION

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B. BACKGROUND

Southwest Marine Inc. (SWM) is an existing full service ship modification, repair, and maintenance facility located on the eastern waterfront of central San Diego Bay in San Diego, California. Operations at SWM generate or have the potential to generate discharges of waste to San Diego Bay, an enclosed bay within the San Diego region, that may cause a short-term loss of designated beneficial uses of the receiving water. Such discharges include water contaminate with abrasive blast material, paint, oils, lubricants, fuels, or solvents.

On April 15, 2002 SWM submitted a *Report of Waste Discharge* (RWD) for a *National Pollutant Discharge Elimination System* (NPDES) Permit. SWM was enrolled in Order No. 97-36, NPDES Permit No. CAG039001, a general permit (General Shipyard Permit) that covered discharges from ship construction, modification, repair, and maintenance facilities and activities in the San Diego Region. Other shipyards covered under Order No. 97-36 included National Steel and Shipbuilding Company (NASSCO) and Campbell Industries. Order No. 97-36 expired on October 15, 2002. Order No. R9-2002-0161 is an individual NPDES permit that is specifically written for the SWM facility.

SWM has a Threat to Water Quality/Complexity rating of 1/A and is considered a major NPDES discharger.

C. FACILITY DESCRIPTION

SWM occupies approximately 10.39 acres of land and approximately 16.64 acres of water, at the foot of Sampson Street, along Belt Street. The San Diego Unified Port District is the lessor to SWM. Land portions of the lease include production shops, warehouse, and administrative offices. Existing facilities allow the repair and overhaul of vessels up to 700 feet in length. Improvements to the water area include five piers, ranging in length from 257 feet to 700 feet, and two floating drydocks. The AFDL (auxiliary floating drydock, small), with a lifting capacity of 4,000 tons, is of concrete construction and is located on the south side of Pier 4. The POSD (Pride of San Diego) drydock has a 22,000 tons lifting capacity and is located south of Pier 2. A facility location map and diagram are attached to the Order (see *Attachment A*).

1. Drydocks

The drydocks are used to conduct repair and maintenance activities which can not normally be conducted while the vessel is waterborne. Vessels to be repaired at Southwest Marine Inc. are removed from San Diego Bay by one of the floating drydocks (AFDL or POSD). The repair activities generally include exterior hull repair, preservation (abrasive blasting and/or hydroblasting and painting), shaft, propeller and rudder repair, and repair/replacement of valves and fittings below the waterline. Ship launching and recovery is accomplished by sinking and floating the drydock by means of ballast tanks that take in and discharge seawater. Wastes generated during ship repair include spent abrasive, paint, rust, petroleum products, marine growth, and general refuse.

2. Marine Railways

Marine railways are used to wheel vessels out of water (also called dry berthing a vessel). Activities conducted on dry berthed vessels are similar to those conducted in drydocks, but usually on a much smaller scale. SWM's marine railways, located between Piers 1 and 2 (Ways 1 and Ways 2/3), were removed in 1998. The sediment around the marine railways was excavated and backfilled. Order No. 98-38, *Waste Discharge Requirements, Southwest Marine Inc., Marine Railway Removal Project*, described requirements for development and

implementation of the sampling and analysis plans for remediation. The project was successfully completed in September of 1998.

3. Piers and Wharfs

The facility has a total of 5 piers. The size of each pier is shown in *Table 1* below.

Table 1: Pier Sizes

Pier #	Width (foot)	Length (foot)
1	40	820
2	30	257
3	66	700
4	30	475
5	30	350

Pier 1 is of concrete construction (510') with a timber approach (310'), Pier 2 is paved with asphalt, Pier 3 and 4 are constructed of concrete, and Pier 5 is of timber construction. The piers are used to support berthed vessels that are undergoing maintenance and repair operations as well as berthing barges used to house vessel crews while ship repairs are being conducted. No maintenance and repair operations are conducted on Pier 5, which is only used for non-industrial activities, such as berthing. Wastes staged and transported across piers include spent abrasives, paint, petroleum products, sanitary waste and general refuse. There are also two concrete wharfs. Building 13 (see map in *Attachment A* of Order) is located on one wharf while the second wharf is utilized to access the POSD drydock.

4. On-Shore Facilities

On-shore facilities include an abrasive blasting building and a paint spray booth area located at the foot of Pier 3 on the southeast section of the facility. On the northern end of the facility is an area used for steam cleaning/pressure washing of vehicles and equipment. This area includes a sump where the effluent is collected and drained to a three-stage clarifier that is connected to the Metropolitan Sanitary Sewer System. Other shore-side facilities include manufacturing and storage areas to support ship repair operations and material staging. Material staging is managed by zones for incoming and outgoing material to and from ships and shops.

SWM manages a solid waste reclamation and recycling area, located at the foot of the gantry crane tracks adjacent to Belt Street, south of Building 8. The solid waste and recycling area segregates, consolidates, reclaims, recycles, and disposes municipal solid waste that is typically generated by shipyard activities. These wastes include metals, wood, and paper/cardboard. A hazardous waste reclamation facility, located west of the solid waste reclamation and recycling area, handles the spent abrasives, paint wastes, oil wastes, oil-contaminated debris, and miscellaneous chemicals removed from ships.

D. DISCHARGE SOURCES AND WASTE CHARACTERIZATION

1. POINT SOURCE DISCHARGES

The Industrial User Discharge Permit (IUD Permit No. 11-0217, Rev No. 02-A1), which expires in September of 2005, authorizes SWM to divert up to 13,000 gallons of industrial waste water to the Metropolitan Sanitary Sewer System. Currently all industrial waste water discharges associated with ship modification, repair, and maintenance activities from SWM, are diverted to the Metropolitan Sanitary Sewer System. The activities include abrasive blasting, hydro blasting, metal grinding, painting, tank cleaning, removal of anti-fouling paint, sheet metal work, electrical work, mechanical repair, engine repair, hull repair, and sewage disposal. The above discharges to San Diego Bay from SWM are prohibited by Order No. R9-2002-0161.

The point source discharges at SWM to San Diego Bay are listed in Table 2 below:

Table 2: Lat/Long of Discharge Points

Discharge Point	Average Flow (MGD*)	Latitude (N)	Longitude (W)
Fire pump at Pier 1	0.14	32° 41.457'	117° 08.770'
Fire pump # 1 at Pier 3	0.14	32° 41.408'	117° 08.685'
Fire pump # 2 at Pier 3	0.14	32° 41.408'	117° 08.685'
Fire pump at Bldg. 13	0.14	32° 41.492'	117° 08.657'
Non-contact cooling water for compressor air system at Bldg. 13	0.36	32° 41.507'	117° 08.667'
Miscellaneous low volume water discharges from various sources on piers, including steam condensate.	N/A	-----	-----
Floating drydock ballast tank water	N/A	-----	-----

* MGD = million gallons per day

• Fire Pumps

SWM operates and maintains pressurized salt water systems for the purpose of fire protection on-board U.S. Navy and commercial vessels. The systems are required and incidental to the normal operating of ships systems.

The water from San Diego Bay is taken into the fire pumps which pressurizes the water to approximately 150 pound per square inch (psi). The pressurized water is then delivered to ships via installed piping and hoses. The discharge to San Diego Bay consists of the excess pressure released at the pump. Excess pressure relief is necessary because otherwise the pumps would suffer damage due to pump cavitation.

Each of the four salt water fire pumps has a capacity of 2000 gallons per minute (gpm). The overpressure discharge per pump can range between 100 to 500 gpm. The number, size, type, and location of ships moored/dry docked at SWM will determine which fire pump will have

to be utilized and how much overpressure will be discharged. One or more fire pumps may be operated year-round, but in past years the fire pumps were rarely operated simultaneously.

- **Non-Contact Cooling Water**

SWM operates and maintains a low-pressure (approximately 125 psi) compressed air system for service to vessels and yard-air for manufacturing. The compressed air is initially produced by an electric air compressors and is at a slightly elevated temperature when exiting the compressor. The temperature must be reduced prior to delivery to the ships and work shops. This is accomplished through a heat exchanger, which passes salt water taken from San Diego Bay through isolated cooling fins or chambers. The salt water does not come in contact with the compressed air. The heat exchanger has a capacity of 300 gpm.

- **Miscellaneous Low Volume Water**

SWM has miscellaneous low volume discharges, such as steam condensate and potable water. These discharges do not ordinarily come in contact with pollutants other than heat.

- **Ballast Tank Water**

Floating drydock ballast water for the POSD and AFDL, per maximum lift, is 9 million gallons and 4.488 million gallons respectively. The intake and discharge point for the floating drydock ballast water is located underwater and a sample of undiluted effluent can not be obtained. The facility does not alter the floating drydock ballast tank water chemically or physically. Chemical analysis of this discharge was not required under the General Shipyard Permit and will not be required in this Order.

Pollutants of concern for the above sources include metals, including chromium, copper, lead, nickel, silver, and zinc. Discharges could include particles of metals present due to eroded pump impellers, valve bodies, and pipe sections. Monitoring and Reporting Program No. R9-2002-0161 requires SWM to monitor for these constituents.

2. INDUSTRIAL STORM WATER DISCHARGES

SWM operates and maintains a Storm Water Diversion System (SWDS). SWM developed this SWDS to eliminate and/or reduce the concentration of pollutants discharged to the receiving waters (San Diego Bay) through the storm water conveyance system. The SWDS consists of 31 catch basins (drains) and associated piping as well as secondary containment at various hazardous materials areas. The diversion system is designed to capture storm water from the hazardous waste storage areas, the solid waste reclamation areas, the POSD wharf, Piers 1 through 4, and several other selected areas.

The first flush of storm water, which was defined to be 0.25 inches in the General Shipyard Permit, generally contains the highest concentration of pollutants. As the storm event continues the runoff contains lower concentrations of contaminants, which decreases the amount of pollutants carried to local receiving waters.

The SWDS can capture up to 1.0 inch of storm water in a 24-hour period, which is eventually discharged to the Metropolitan Sanitary Sewer System. An additional 0.25 inch of storm water may be discharged during a storm event in accordance with the IUD Permit (same as mentioned previously). A limit on the volume of storm water allowed to be discharged to the Metropolitan Sanitary Sewer System was not specified in the IUD Permit.

In the event of a major storm that exceeds the storm water holding capacity of 1.25 inches in a 24-hour period, SWM will discharge storm water through the following outfalls:

Table 3: Storm Water Outfalls

Outfall	Latitude (N)	Longitude (W)
SW1 - north quay wall by Transportation Department	32° 41.566'	117° 08.716'
SW2 - by restroom at beginning of Pier 1	32° 41.573'	117° 08.685'
SW3 - west end of Pier 2 at south end of pedestrian bridge	32° 41.559'	117° 08.673'
SW4 – south quay wall at foot of Pier 3 (Municipal discharge)	32° 41.492'	117° 08.604'
SW5 – quay wall south of Pier 3	32° 41.486'	117° 08.593'
SW6 – eliminated	-----	-----
SW7 – south east head of Pier 4	32° 41.507'	117° 08.667'
SW8 – south east head of Pier 1	32° 41.507'	117° 08.667'

The following is a brief descriptions of the areas where significant industrial activities are conducted and the corresponding spill/release prevention measures listed in SWM's Storm Water *Best Management Practices (BMP) Plan*:

1. Abrasive Blast Area

Abrasive blasting is conducted in small parts booths, on ships, in drydocks, and in the abrasive blast building. The abrasive blast building is completely enclosed and therefore not exposed to storm water. Materials that are removed from the building could contain abrasive blast grit. SWM's BMP Plan identifies the removal of materials from the building as a possible storm water pollution source and requires a thorough inspection of pallets and materials prior to authorizing removal from the building. The BMP Plan also addressed the containment and cleanup of spend abrasive material from other areas listed above.

2. Outdoor Paint Area

The outdoor paint area is located at the foot of Pier 3, adjacent to the abrasive blast area. In this area, paint and primer is applied by brushes, rollers, and spray guns. Hazardous wastes, such as paint debris and 55-gallon drums of paint sludge, are stored as well. Large permanent curtains surround the entire outdoor paint area.

3. Paint Booth Area

This area is located in the southeastern portion of the facility on the north side of Building 40. Hazardous waste generated in this area is transported to the hazardous waste yard at the end of each work shift.

4. Vehicle Maintenance Area

Regular vehicle maintenance, such as oil changes, are performed indoors. Steam cleaning and pressure washing of rolling stock and equipment is performed in a designated area located on the north end of the facility. The effluents generated are collected in a sump and drain to a 3-stage clarifier, which is connected to the Metropolitan Sanitary Sewer System.

5. Solid Waste Reclamation Area

Activities resulting from solid waste reclamation, recycling, and segregation are conducted outdoors at the solid waste reclamation area. The solid waste area primarily manages non-hazardous waste consolidation and recyclable metals, wood, and cardboard. This area is also used for collection of spent abrasives and shrink wrap material. The quantities of wastes processed in this area are dependent upon the amount of industrial activity taking place at SWM.

6. Hazardous Waste Storage Yard

Hazardous waste at SWM is stored for a maximum of 90 days in the hazardous waste storage yard. The types and amount of hazardous waste stored varies depending upon the amount of industrial activity taking place at SWM. Examples of hazardous waste stored at the hazardous waste storage yard are paint-related waste, oily waste and debris, metal contaminated debris, and asbestos.

7. Shipyard Assembly/Open Work Area

Storm water is recovered from all shore-side industrial areas and stored in tanks for subsequent disposal to the Metropolitan Sanitary Sewer System.

8. POSD Wharf/Ramp

The POSD wharf/ramp is utilized for storage of materials and equipment when a ship is in the POSD drydock for repair and maintenance. Materials stored on the wharf/ramp include paints and solvents stored in a flammable storage locker, oily wastes, tank cleaning equipment, and a 19,000-gallon fixed treatment unit for wastewater. The POSD wharf/ramp is plumbed to divert all storm water runoff to baker tanks. The storm water is eventually discharged to the Metropolitan Sanitary Sewer System.

9. Drydocks (AFDL and POSD)

Standard practice at SWM is to collect all storm water runoff from drydocks, but storm water may be discharged when a drydock is not in use. When a drydock is in use, all contaminated water (storm water and wash water) is directed to a receiving sump located on the drydock. The water is pumped to a holding tank and disposed of in accordance with SWM's Industrial User Discharge Permit (to the Metropolitan Sanitary Sewer System) or the trucked waste permit. Structural control measures, such as curtains, tarps, and shrink-wrap, are put in place

if any ship repair activity poses a potential for a spill to occur. These control measures are approved and periodically inspected by SWM's Environmental Affairs personnel.

10. Pier 1, 2, 3, and 4

The piers are used for moored ships undergoing repair and maintenance. These activities are generally short-term and can result in storage of materials awaiting delivery aboard a vessel or materials stored in support of industrial activities. The storage areas are regularly inspected to ensure preventive measures are in place, such as isolation of abrasive blast equipment. A hazardous waste accumulation area exists on the piers while ships are being serviced. Typical wastes include paint debris, paint sludge, and petroleum wastes. The piers are part of Southwest Marine's SWDS. Storm water from Piers 1 through 4 is recovered and stored in holding tanks for subsequent discharge to the Metropolitan Sanitary Sewer System.

E. BASIS FOR WASTE DISCHARGE REQUIREMENTS AND EFFLUENT LIMITATIONS

Section 402 of the federal Clean Water Act (CWA) gives the U.S. EPA the authority to issue NPDES permits for discharges into navigable waters and to prescribe conditions for such permits necessary to carry out the provisions of the CWA. In California, the U.S. EPA has delegated this authority to the State of California.

Section 402 (a)(1) of the CWA authorizes the issuance of best available technology (BAT) limitations in NPDES permits using best professional judgment (BPJ). Thus, effluent limitations for the pollutants specified in Order No. R9-2000-0161 are based on the use of 'best available technology' and 'best available technology economically achievable for the removal of pollutants.' Effluent limits for point source discharges are established for the following parameters: oil and grease, settleable solids, turbidity, pH, and temperature.

1. NPDES Regulation for Best Management Practices

According to 40 CFR 122.44(k) of the NPDES regulations, Best Management Practices (BMPs) may be included as permit conditions to control or abate the discharge of pollutants when:

- Authorized under Section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;
- Authorized under Section 402(p) of the CWA for control of storm water discharges;
- Numeric effluent limitations are infeasible; or
- The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA.

At SWM, the pollutants and wastes associated with ship repair and maintenance activities (as described in *Section D.1* of this Fact Sheet) are such that implementations of BMPs is appropriate and necessary. An effective way to address the potential for the discharge of

pollutants and waste from the site is the implementation of a BMP plan that emphasizes preventive measures.

Order No. R9-2002-0161 requires SWM to develop, implement, and maintain a BMP plan.

2. Basin Plan

The Comprehensive Water Quality Control Plan, San Diego Basin (9) (hereinafter Basin Plan) was adopted by this Regional Board on September 8, 1994 and subsequently approved by the State Water Resources Control Board (SWRCB) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by this Regional Board and approved by the SWRCB. The Basin Plan designates beneficial uses, narrative and numerical water quality objectives, and prohibitions that are applicable to the discharges regulated under this Order.

i. Beneficial Uses

The Basin Plan (p. 2-47, Table 2-3. Beneficial Uses of Coastal Waters) established the following beneficial uses for the waters of San Diego Bay:

- a. Industrial Service Supply;
- b. Navigation;
- c. Contact Water Recreation;
- d. Non-contact Water Recreation;
- e. Commercial and Sport Fishing;
- f. Preservation of Biological Habitats of Special Significance;
- g. Estuarine Habitat;
- h. Wildlife Habitat;
- i. Rare, Threatened, or Endangered Species;
- j. Marine Habitat;
- k. Migration of Aquatic Organisms; and
- l. Shellfish Harvesting.

ii. Toxicity

The Basin Plan includes the following narrative water quality objective for toxicity:

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water that is consistent with requirements specified in U.S. EPA, State Water Resources Control Board or other protocol authorized by the Regional Board. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour acute bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

- **Point Source Discharges and Toxicity**

Toxicity testing on fire protection water, non-contact cooling water, and miscellaneous low volume discharges was required under the General Shipyard Permit and will also be required under Order R9-2002-0161. A review of the last 4 years toxicity test results for fire protection water, non-contact cooling water, and miscellaneous low volume discharges has shown that the percent survival ranged between 80% and 100% and was never in violation of the acute toxicity requirement of 'shall not produce less than 90 % survival, 50 % of the time and not less than 70 % survival, 10 % of the time'. The monitoring frequency for toxicity of fire protection water and non-contact cooling water will remain at annually. The monitoring frequency for miscellaneous low volume discharges, such as steam condensate, is reduced from semi-annual to annual.

- **Storm Water Discharges and Toxicity**

Historical toxicity monitoring results of storm water discharges from SWM have shown that the percent survival was as low as zero percent. The acute toxicity limit specified in Order No. R9-2002-0161 is applicable to all storm water discharges.

On September 11, 2002 the Regional Board adopted an NPDES permit (Order No. R9-2002-0002) for the U.S. Naval Base at Point Loma (NBPL), in San Diego. Order No. R9-2002-0002 directed the U.S. Navy to conduct a 4-year study of the toxicity in storm water discharges from all areas of the Naval Submarine Base (SUBASE) in the NBPL complex, at which industrial activities are undertaken. The study would recommend a scientifically valid survival rate for acute exposure to discharges of storm water from industrial areas at SUBASE. The study may include a Toxicity Identification Evaluation (TIE), or a Toxicity Reduction Evaluation (TRE). Since the industrial activities at the SUBASE are similar to those conducted at SWM and other shipyards (i.e. ship repair activities include abrasive blasting, hydroblasting, metal grinding, painting, tank cleaning, removal of bilge and ballast water, removal of anti-fouling paint, sheet metal work, electrical work, mechanical repair, engine repair, and hull repair), the Regional Board has no objection to SWM participating in this study and identifying and recommending a scientifically valid acute toxicity discharge specification. Until an alternate acute toxicity limit for storm water is developed,

validated, and presented for Regional Board review and approval, the discharge specification '90 % survival, 50 % of the time, and not less than 70 % survival, 10 % of the time' in Order No. R9-2002-0161 shall continue to be enforced at SWM.

3. Enclosed Bays and Estuaries Policy

The State Water Resources Control Board (State Board) adopted a *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (Bays and Estuaries Policy) on May 16, 1974. The Bays and Estuary Policy establishes principals for management of water quality, quality requirements for waste discharges, discharge prohibitions, and general provisions to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. These principals, requirements, prohibitions, and provisions have been incorporated into Order No. R9-2002-0161.

The Bays and Estuaries Policy contains the following principle for management of water quality in enclosed bays and estuaries, which includes San Diego Bay:

The discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge. For the purpose of this policy, treated ballast waters and innocuous non-municipal wastewater such as clear brines, wash water, and pool drains are not necessarily considered industrial process wastes, and may be allowed by Regional Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

The Bays and Estuary Policy also prohibits the discharge or by-passing of untreated wastes. This Order prohibits the discharge and bypassing of untreated waste except for non-contact fire protection system water.

The Bays and Estuaries Policy also contains the following principle for management of water quality in enclosed bays and estuaries, which includes San Diego Bay:

The following policies apply to all of California's enclosed bays and estuaries:

- *Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.*

- *Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution practicable to minimize concentrations of substances not removed by source control or treatment.*
- *Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.*
- *Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.*
- *Nonpoint sources of pollutants shall be controlled to the maximum extent practicable.*

The terms and conditions of Order No. R9-2002-0161 are consistent with the above policies.

4. California Toxics Rule and Implementation Policy

The U.S. EPA promulgated the final California Toxic Rule (CTR) on May 18, 2000, as required by Section 303(c)(2)(B) of the federal Clean Water Act. The CTR regulations, codified in 40 CFR 131, establish water quality standards for inland surface waters.

The water quality criteria established in the CTR is legally applicable in the State of California for inland surface waters, and enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

On March 2, 2000, the State Board, in Resolution No. 2000-15, adopted a *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Implementation Policy). The Implementation Policy implements the provisions promulgated by the U.S. Environmental Protection Agency in the California Toxic Rule (CTR) and establishes the following:

- a) implementation provisions for priority pollutant criteria promulgated by the U.S. EPA through the National Toxic Rule (NTR) and the CTR, and for priority pollutant objectives established in the Basin Plan;
- b) monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin) equivalents; and
- c) chronic toxicity control provisions.

The above provisions are only applicable to non-storm water discharges. Any storm water discharges to San Diego Bay are exempt from the provisions of the Implementation Policy. As indicated in *Section D.1*, the only non-storm water discharges from SWM to San Diego Bay are fire protection water, non-contact cooling water, ballast tank water, and miscellaneous low volume discharges. These point source discharges can be considered to be

innocuous and non-industrial in nature. If a significant or material change occurs in the discharges (i.e. chemical concentrations, physical properties, location, volume, or frequency), the potential impact to beneficial uses may change or cause a violation of the Order No. R9-2002-0161. Any change in either the nature or volume of the discharges can be readily identified and evaluated through the monitoring requirements specified in Monitoring and Reporting Program No. R9-2002-0161.

On April 15, 2002 SWM submitted analytical results of samples taken from fire protection water (fire pump at Bldg.13) and non-contact cooling water. No samples for the CTR analysis were taken from the other fire pump stations. The fire pump at Bldg. 13 is located in the approximate center of the facility. Samples from the fire pump at Bldg. 13 are considered to be representative of all fire pump discharges at the SWM facility. The sampling was conducted on March 26, 2002 and was analyzed by Del Mar Analytical Laboratory (Toxicity Equivalency Factors for 2,3,7,8-TCDD) and Weck Laboratories, Inc. (40 CFR 131.38 Priority Pollutants).

Pursuant to Section 1.3 of the Implementation Policy, a reasonable potential analysis (RPA) of data is required to determine which priority pollutants would require effluent limitations. All priority pollutants except antimony, arsenic, selenium, copper, and zinc were found to be in non-detectable levels in both effluent and background for the sampling conducted on March 26, 2002. A review of 5 year effluent sampling data for metals from fire protection water and non-contact cooling water discharges submitted as part of the General Shipyard Permits monitoring requirements, consistently showed detectable levels of copper. The General Shipyard Permit did not require sampling for intake water for metals and other priority metals.

Staff conducted an RPA for all priority pollutants, except copper, using the SWRCB's California Permit Writer and Training Tool (CPWTT) computer program. Based on the results of this analysis and in conjunction with the use of Best Professional Judgement (BPJ), staff concluded that effluent limits will not be required for any of the applicable metals, volatiles, semi-volatiles, pesticides, polychlorinated biphenyls (PCBs), and 2,3,7,8-TCDD (dioxin), listed in the CTR.

The existing sampling data for copper from the point source discharges is inadequate since only nine data points are available for the effluent and one data point is available for San Diego Bay intake water. Since copper is the principle priority pollutant that may be entrained in the point source discharges due to contact with eroding piping, pump impellers, and valve bodies, it is important that adequate data for these constituents be obtained prior to conducting the RPA.

Pursuant to Section 2.2.2 (Interim Requirements for Providing Data) of the Implementation Policy, Order No. R9-2002-0161 requires the discharger to conduct additional effluent and intake sampling for copper for fire protection water and non-contact cooling water discharges. Monthly sampling for copper will be required starting with the adoption of this Order for a two year period. Once adequate data has been submitted, staff will conduct an RPA to determine if effluent limits are needed for copper. If the RPA identifies a need for effluent

limits, staff will calculate limits using procedures specified in Section 1.4 of the Implementation Policy. Pursuant to Section 1.4.4 of the Implementation Policy, staff will also determine if intake water credits can be granted to SWM during establishment of these effluent limits. Order No. R9-2002-0161 may be re-opened at a later date to incorporate the results of this analysis.

Section 3 of the Implementation Policy requires effluent monitoring for 17 congeners of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) for industrial dischargers. These congeners and corresponding toxic equivalency factors (TEFs) are listed in Table 4 of the Implementation Policy. The purpose of the monitoring is to assess the presence and amounts of the congeners being discharged to inland surface waters, enclosed bays, and estuaries for the development of a strategy to control these chemicals in a future multi-media approach.

Pursuant to Section 3 of the Implementation Policy, the discharger will be required to monitor its effluent for the presence of the 17 congeners once during dry weather (June through August) and once during wet weather (January through March) following the issuance of Order No. R9-2002-0161. The discharger will be required to multiply each measured or estimated congener concentration by its respective TEF value and report the sum of these values. The provisions of this monitoring requirement are incorporated into MRP No. R9-2002-0161.

5. Ocean Plan

The SWRCB adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on December 3, 2001. The Ocean Plan establishes water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions.

Although the Ocean Plan is not applicable to enclosed bays, such as San Diego Bay, the salinity and beneficial uses of San Diego Bay are similar to those of the ocean waters of the State. Therefore, in order to protect the beneficial uses of San Diego Bay, this Order uses the Ocean Plan as a reference for developing discharge specifications, receiving water prohibitions, and narrative limitations and to supplement the provisions contained in the California Toxics Rule, the Implementation Policy, and the Enclosed Bays and Estuaries Policy.

Order No. R9-2002-0161 requires all point source discharges to comply with the grease and oil, settleable solids, turbidity, and pH effluent limits listed in Table A of the Ocean Plan.

6. Thermal Plan

According to *Section 4.B(1), New Discharges, Enclosed Bays*, of the State Water Quality Control Plan for Control of Temperature in Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan), elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving water by more than 20 degrees F. According to Definition 11 of the Thermal Plan, SWM is a new discharger since the shipyard commenced operations after the adoption date of the Thermal Plan.

The point source discharges at SWM to San Diego Bay are applicable to Section 4.B(1) of the Thermal Plan. The provisions of this discharge requirement are incorporated into Order No. R9-2002-0161.

7. 303 (d) List and Sediment Monitoring

Section 303(d) of the Clean Water Act requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits ("impaired" water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, States are required to prioritize waters/watersheds for future development of total maximum daily load (TMDL).

In February 1998, the Regional Board designated 30 acres of San Diego Bay shoreline in the vicinity of the Coronado Bridge as an impaired water body and included this area in the Section 303(d) list. The listing was the result of information gathered for the *Chemistry, Toxicity and Benthic Community Conditions in Sediments of the San Diego Bay Region, Final Report*, September 1996 (commonly known as the report for the Bay Protection and Toxic Cleanup Program (BPTCP)).

The northwest side of Southwest Marine (around Pier 1) is part of the impaired area listed in the 303(d) list as 'Near Coronado Bridge 30 acres'. The area was listed as being impaired for benthic community effects and sediment toxicity.

The General Shipyard Permit established a sediment monitoring program for SWM that required the facility to collect annual surficial sediment samples at 16 stations. The sediment monitoring program also instituted sampling at 3 background reference stations in San Diego Bay. The monitoring included sediment sampling for indicators (grain size, trace metals including cadmium, chromium, copper, nickel, silver, mercury, arsenic, lead, and zinc, and tributyltin (TBT)), total petroleum hydrocarbons (TPH), polychlorinated biphenyls/triphenyls (PCBs/PCTs), and polyaromatic hydrocarbons (PAHs), and an analysis of paint chips entrained in the sediment. The purpose of the sampling was to monitor changes in the levels of sediment contamination over a period of time and to use the information for any future cleanups and implementation of waste load allocations for the TMDL program.

Elevated levels of metals, such as copper and zinc, in the San Diego Bay bottom sediment adjacent to the SWM and NASCCO facilities led the Regional Board to issue Resolution No. 2001-03. The Resolution, adopted February 21, 2001, directed the Executive Officer to issue a Water Code Section 13267 letter to SWM and NASSCO requiring each shipyard to submit the results of a site-specific study to develop sediment cleanup levels and identify sediment cleanup alternatives by June 21, 2001. SWM is currently conducting Phase 2 of the sampling plan to develop sediment cleanup levels. The cleanup is expected to start in spring of 2003.

Sediment monitoring, as specified in Monitoring and Reporting Program No. R9-2002-0161, will not be required until the sediment cleanup at SWM is successfully completed. The first set of samples from the SWM sampling stations and reference stations, outlined in the MRP No. R9-2002-0161, are required to be taken during the time the last post cleanup sampling is conducted. This will establish a baseline set of data after cleanup that can be used to compare the annual sediment monitoring data submitted thereafter to establish if or how concentrations in the sediment change over time.

8. Antidegradation Policies

Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water is consistent with antidegradation policies. Order No. R9-2002-0161 does not authorize any new discharges. Furthermore, effluent concentration and mass emission rate limitations in this Order are the same or more stringent than those in the General Shipyard Permit. Therefore, the requirements of Order No. R9-2002-0161 are consistent with antidegradation policies.

The specifications, prohibitions, and monitoring requirements in Order No. R9-2002-0161 applies to all ship repair and maintenance activities conducted at SWM.

F. EFFECTIVE DATE AND EXPIRATION DATE

Order No. R9-2002-0161 becomes effective 10 days after its adoption provided the Regional Administrator, U.S. EPA, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn. The expiration date of Order No. R9-2002-0161 is November 13, 2007.

G. WRITTEN COMMENTS

Interested persons are invited to submit written comments upon these draft waste discharge requirements. Comments should be submitted either in person or by mail before November 6, 2002 to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
ATTN: Industrial Compliance Unit
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Oral comments regarding tentative Order No. R9-2002-0161 will be received during the hearing on November 13, 2002.

H. PUBLIC HEARING

In accordance with 40 CFR 124.10, the RWQCB must issue a public notice whenever NPDES permits have been prepared, and that the tentative permits will be brought before the RWQCB at a public hearing. The public notice has been published in The San Diego Union-Tribune newspaper no less than 30 days prior to the scheduled public hearing.

The San Diego Regional Board, at a public hearing, will consider the draft waste discharge requirements on November 13, 2002, beginning at 9:00 a.m. at the following location:

Regional Water Quality Control Board, San Diego Region
Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

I. REVIEWS OF WASTE DISCHARGE REQUIREMENTS

Copies of the waste discharge requirements and other documents (other than those that the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying according to the following schedule (except holidays):

Monday and Thursday: 1:30 p.m. to 4:30 p.m.

Tuesday and Wednesday: 8:30 a.m. to 11:30 a.m. and
1:30 p.m. to 4:30 p.m.

Friday: 8:30 a.m. to 11:30 a.m.

An electronic copy of the Fact Sheet and Order can be accessed on the Regional Board website at <http://www.swrcb.ca.gov/rwqcb9/>.

J. ADDITIONAL INFORMATION

For additional information regarding Order No. R9-2002-0161, interested persons may write to the Regional Board address above, call Ms. Sabine Knedlik of the Regional Board staff at (858) 467-2725, or e-mail her at kneds@rb9.swrcb.ca.gov.

K. REFERENCES FOR WASTE DISCHARGE REQUIREMENTS

The following documents provide the necessary references for the basis of this NPDES permit:

- a. Order No. 97-36, General NPDES Permit No. CAG039001, Waste Discharge Requirements from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A)
- b. The Water Quality Control Plan for the San Diego Basin (9) (Basin Plan), 1994.
- c. The Code of Federal Regulations Part 40, Section 122, 131, and 136.
- d. The Clean Water Act; Sections 208, 301, 302, 303, 304, 306, 307, 402, 403, and 405.
- e. The California Code of Regulations, Title 23, Division 3 and 4.
- f. Report of Waste Discharge, NPDES Permit Renewal Application, Southwest Marine, Inc., April 15, 2002.
- g. SWRCB Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Implementation Policy)